
**ANÆSTHESIA IN A CASE WITH DIMINISHED
BREATHING AREA.**

BY

G. GORDON CAMPBELL, B.Sc., M.D.,

**Assistant Demonstrator in Medicine, McGill University, Assistant Physician, Montreal
General Hospital.**

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ANÆSTHESIA IN A CASE WITH DIMINISHED BREATHING AREA.*

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The patient, Mrs. S., was a middle-aged, slightly built woman, of medium height, much emaciated, and suffering from an enormous abdominal tumour. As I had not seen the case until just before I began to anæsthetise her, I had prepared to administer ether by means of a Clover's inhaler. While making the usual explanations about the effect of the ether, I noticed that her respirations were extremely shallow and quicker than normal; and on requesting her to take several long breaths, in order to fill the bag before turning on the ether, I saw that this was an impossibility. No effort on her part increased the air capacity of the lungs as it was already taxed to the utmost limit. I then turned on the ether and gave it very cautiously at first, with plenty of fresh air, not thinking it advisable in this case to hasten the anæsthesia by shutting off the air. All went well until there was about 20 per cent. of ether vapour in the respired air, and then the breathing, which had been gradually getting quicker, became rapid and laboured, and reminded me very strongly of the condition present during a bad attack of asthma; violent efforts at respiration and little or no air entering the chest. There was no spasm in the air passages, and the patient was only partially anæsthetised, so, in order to remove any possible degree of asphyxia which might be added to the effect of the ether, I gave it without using the bag. No improvement followed, and chloroform given on a piece of stockinette stretched over a wire frame was substituted. The dyspnoea gradually passed off and the breathing, although continuing quick and shallow, was not laboured, the pulse, however, was rapid and of small volume. Full anæsthesia was established in a few minutes, and after the usual preparation the abdomen was opened and the growth removed. While the adhesions between it and the intra-abdominal organs were being separated, the usual respiratory reflexes were excited, and a condition of dyspnoea, similar but less pronounced than that seen at the outset under ether, occurred. I had to request the operator once or twice to cease his manipulations for a few moments and allow the quickened respirations to subside. I feared

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to continue giving the chloroform while they were present lest I should give an overdose, and withdrawing it altogether for any length of time would have allowed of partial recovery of the patient ; an equally dangerous condition. The pulse had become much slower (80) and was of very poor volume indeed when the tumour was removed, eighty minutes after I began the anæsthesia. I then replaced the chloroform with ether and continued the anæsthesia for an hour longer with the Clover's inhaler.

In order to compare as far as possible the two agents, without having a possible third factor, asphyxia, in the case, I gave six breaths of pure air to every one from the bag. An almost immediate improvement was noted in the patient's condition, the pulse became quicker, increasing to 105, but was very much fuller, and more forcible, although in sudden relief of abdominal tensions like this the opposite usually occurs, the patient bleeding into her own abdominal vessels. The respirations increased from 24 to 30 per minute, and intra-abdominal reflexes of about equal intensity to those observed under chloroform were set up by further manipulations in the abdominal cavity. Now, however, there was no interference with the breathing, showing that the cause of the former dyspnœa had been mechanical altogether. The immense size of the solid tumour had completely filled up the abdominal cavity and pushed up the diaphragm encroaching upon the area of the thorax. The dyspnœa here was plainly due to the physiological effect of the ether absorbed upon the respiratory centre, causing quickened breathing ; once the mechanical cause of obstruction was removed, the increased respiratory rate and increased depth of breathing caused no distress. The patient made an exceptionally good recovery and had no after vomiting. The chief interest in the case, apart from the comparison of the two agents, lies in the fact that it shows a condition in which chloroform should be selected in preference to ether as an anæsthetic. It must, however, be borne in mind that in cases such as these, where there is some interference with free breathing, the danger of accidents from chloroform is very considerably increased.